

A method for routing optical packets using multiple wavelength labels includes converting optical packet address signals to a plurality of optical pulses having different time-deviated wavelengths by executing a first operation to impart a wavelength dependent delay time with respect to a plurality of optical pulses having different wavelengths at a same time axis position. When the optical pulses are transmitted along a predetermined optical path having dispersion, the dispersion is compensated for by executing a second operation on the optical pulses corresponding to a reverse process of the operation to impart a wavelength dependent delay time. This second operation results in the generation of a plurality of optical pulses having different wavelengths at a given point on the time axis. The pulse signals thus generated are used to determine the packet transmission route.